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Secret research draws RIT students

By Eugene Marino

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Tom Johnson, a 22-year-old math major at Rochester Institute of Technology, helped develop a computer model for a new war game a couple of years ago.

The game wasn't for fun. It was for the Pentagon — and classified.

Geoffrey Welch, another 22-year-old math major at RIT, performed accuracy studies for the Trident nuclear missile. Those studies included statistical research and writing computer programs for simulated flights. His work also was classified.

Johnson spent six quarters at the U.S. Army's Concepts Analysis Agency in Bethesda, Md., as a co-operative education student. Welch spent four quarters at the Naval Surface Weapons Center as a co-op.

Neither is a rarity on RIT's campus these days.

RIT co-op students — juniors and seniors who alternate quarters of full-time work with quarters of study — are going to work for U.S. intelligence-gathering and defense-research agencies in numbers that might shock their older brothers and sisters from the Vietnam War era.

Those numbers put RIT in a class with only a handful of schools in the nation.

In the last year and a half, about 30 RIT co-op students have gone to work just for the National Security Agency and the Central Intelligence Agency, said George T. Georgantas, a professor who is head of the math department.

Four or five other defense research agencies are actively and successfully recruiting RIT co-op students.

The students, most from computer science, math, engineering and imaging programs, become involved in work ranging from cryptology studies for the National Security Agency to photographic analysis for the CIA to analysis of kitchen facilities for the Army. Many of these students go on to work full-time for a defense agency.

Because much of the work co-op students do is classified, the agencies perform a thorough security check on them before they are accepted for employment.

The agencies themselves probably find RIT students "to their taste" because the students are

more conservative than most college students, said Prof. Wiley McKinzie, director of the Center for Computer Science and Technology. The campus is "quite conservative," said Angela Strode, a senior who is chairman of the Student Directorate, the student government.

EMPLOYERS, BOTH private and governmental, find RIT's career-oriented students attractive because of the emphasis the school puts on applied learning.

The agencies with the most active, organized recruiting efforts are the NSA and the CIA, said Beverly Gburski, director of the co-op program at RIT.

The NSA is probably the most secret agency in the U.S. government. It owes its existence to a top-secret order signed by President Harry S. Truman in 1952. Its mission is twofold: to secretly gather intelligence through technological means, such as satellite eavesdropping systems, and to protect the government's confidential messages through encryption. The NSA is based at Fort Meade, Md., and has listening posts in many nations.

Recruiters from the NSA and CIA visit the RIT campus twice a year each and give presentations for interested students, Gburski said.

The NSA received 30 co-op "placements" from RIT in the 1984-1985 school year, according to Bonnie Salem, a coordinator in RIT's co-op program. That would translate to about 12 to 15 students, because a placement equals one three-month stint and one student often takes more than one in a year.

AN NSA SPOKESMAN, who said his name could not be used in print in connection with the agency, said there were "a lot" of RIT students in the NSA's co-op program. Schools typically have two or three or, at most, five students in the program, he said. About 300 students from 50 or so schools are in the NSA's program at any one time.

Robert Chico, the coordinator for student programs at the CIA, said a "good number" of RIT students were in the CIA's program. RIT had 10 placements there in the 1984-1985 school year. Chico

would say only that "several hundred" students were in the CIA's program and that they represent a cross-section of schools.

Among the other active defense agencies on the RIT campus are:

- The Naval Surface Weapons Center in Dahlgren, Va., and White Oaks, Md., which had 15 co-op placements from RIT in 1984-85. It has about 225 students overall.

- The U.S. Army's Armament Research and Development Center in Dover, N.J., which had 14 RIT placements. It had between 20 and 100 students overall.

- The U.S. Army's Concepts Analysis Agency in Bethesda, Md., which will have 10 RIT students out of 79 students total in the 1985-1986 school year, according to Johnson, the math major who worked there.

THE VAST MAJORITY of RIT's 3,000 co-op students find work with private employers. In 1984-1985, for example, there were almost 4,600 placements of RIT co-op students overall. The five most active defense agencies received 76 of those placements, Salem said.

Though RIT is well represented in the co-op programs of these defense agencies, it apparently is not disproportionately represented if RIT's technical orientation and the size of its co-op program are taken into account.

Drexel University in Philadelphia has a similar technical orientation and a larger co-op program, one with more than 4,000 students. It sends what appears to be a much larger number of co-op students to these programs. In 1984-1985, 43 students worked for programs just within the Department of Defense, including 17 at the NSA, said Gary Hamme, head of the center for cooperative education at Drexel. A total of 278 other students worked for a wide range of other defense-related agencies.

Northeastern University in Boston, on the other hand, has 9,600 students in its co-op program, but has a liberal-arts orientation. It sent no students to the CIA in 1984-85, two to the NSA, none to the Concepts Analysis Agency and

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two to the Naval Surface Weapons Center, said Richard Sprague, associate dean of cooperative education at Northeastern.

AT THE UNIVERSITY of Rochester, which has an on-campus program, one graduate in 1965, who earned a degree in computer science, accepted a job with the CIA; one graduate went to work for the NSA; and none accepted work with the Naval Surface Weapons Center, though two offers were made, said Maureen Beaudry, a recruiting coordinator in the placement office.

Other schools often mentioned as large contributors are the University of Akron, in Ohio, which has a strong engineering program, and Virginia Polytech in Blacksburg.

While the presence of defense recruiters would have drawn adverse attention on most college campuses 15 years ago, it has apparently stirred not a ripple of controversy at RIT.

"There is no open student concern about these recruiters being on campus," said Jim Miller, RIT's associate vice president for institutional advancement.

"Not many students are vocal about bucking the system. Students here are geared toward professional careers, not moral issues," said Strode, chairman of the student government.

BOTH GBURSKI, WHO runs the RIT co-op program, and Strode, the student government leader, said they see a trend among RIT students to be more willing to work in defense. More than 100 students showed up the last time a CIA recruiter gave a presentation about his agency, said Manny Contomanolis, associate director of RIT's co-op program.

Richard Kenyon, dean of the College of Engineering at RIT, said he sees nothing unusual about students going to work for defense agencies. "Anyone who can operate in the world of electronics and information processing is in demand," he said.

And recruiters like RIT's emphasis on applied knowledge. Computer students, for example, are made to write more programs sooner than students in other schools and have done a good deal of lab work by their third year, said McKinzie, director of RIT's Center for Computer Science and Technology.

A math department brochure describes its programs as "careful-

ly designed to meet the needs of both students and their potential employers . . . That's how mathematics and statistics are taught at RIT — with an eye on their applications. And this is what makes it so easy for our graduates to find jobs."

RIT ALSO ATTRACTS employers because it offers some unusual programs. The school, for example, offers the only undergraduate programs in the nation in microelectronic engineering and in imaging science.

The CIA's Chico calls RIT "just a super-school." He said that the number of RIT students in the CIA's program "reflects the agency's strong, positive opinion of RIT and its unique areas of interest, especially in photo science, and its excellent programs in computer science and engineering."

The biggest advantage of the co-op program for the defense agencies — as well as for private employers — is that it is an excellent recruiting tool in the competition for technically trained persons.

About 80 percent of all students who enter the NSA's co-op program eventually become full-time employees of the agency, the NSA's spokesman said.

Elaine Tierney, the co-op coordinator at the Armament Research and Development Center, said that 90 percent of co-op students accept full-time employment there. At the CIA, the retention rate is "above 50 percent," Chico said.

Johnson, the math major, has accepted a job with Electronic Warfare Associates, a defense consulting firm in Vienna, Va. Welch has an offer to work full time for the Naval Surface Weapons Center, but he would like to work for one of the defense-research agencies closer to his home in Massachusetts.

STUDENTS WITH AN interest in defense work can quickly get involved in "heavy" assignments, which partly offsets the fact that they are paid less in the government programs than they would be in the private-sector co-op jobs, said M. Richard Rose, president of RIT.

"I was taken aback by the level of responsibility I was given," said Welch, the math major who worked at the Naval Surface Weapons Center. Johnson said that on his first tour at the Concepts Analysis Agency he performed tasks usually done by senior staff members.

It is hard to pin down exactly when the relationship between

RIT and most of these agencies began. The Naval Surface Weapons Center began a formal co-op agreement with RIT in 1979. And Gburski said RIT has had a "very good relationship with the CIA and NSA" for five and a half years, the length of time she's been on the job, but she believes the relationship began long before then.

But the relationship with the CIA apparently goes back much further. An agency memorandum dated Oct. 16, 1975, mentioned RIT's program as one with which the CIA had established "certain relationships which might be categorized as 'special' or 'particular.'"

THE MEMO, FROM the CIA's director of personnel, was among documents made public under a Freedom of Information suit filed by Morton Halperin, former aide to Henry Kissinger in the Nixon administration.

The documents also revealed that RIT's College of Graphic Arts and Photography received about \$200,000 from the CIA in the form of grants between 1966 and 1975.

The future of the student programs, however, may be in doubt at some agencies. Because of ceiling levels imposed by the Department of the Army, the Armament Research and Development Center now has only 20 co-op students. It once had 100. The Naval Underwater Systems Center in Newport, R.I., which has had several students from the National Technical Institute for the Deaf in its summer program, will have no summer program this year because of a freeze declared by the Navy.

A positive note for the co-op programs may be the Strategic Defense Initiative, the so-called "Star Wars" program.

SDI may create even greater demand for technically trained persons in certain areas, said Rose, a former deputy assistant U.S. secretary of defense for education. In some programs already, like imaging science, "we could place dozens to hundreds more students" in industry and government, he said. SDI, he said, will make the competition even more acute.

And the future also might be brighter at such agencies as the CIA and NSA, whose budgets are not subject to close congressional scrutiny.

"The agency's future rests with kids. RIT is a very progressive school and we hope to increase our involvement with it in the future," the CIA's Chico said.